

Heat Safety – Deadly Vehicle Ovens

Vehicles can become deadly heat ovens after we turn off the air conditioning and leave them for a few minutes. Temperatures inside a vehicle can soar 35 degrees in the first 15 to 30 minutes whether the windows are cracked or not. That means that on a sunny 70-degree day in southern California, the temperature inside your vehicle can exceed 100 degrees within a very short period of time. Sadly, some people leave small children, elderly adults, or pets in this sweltering oven for “just a few minutes” while they run an errand or forget altogether they were left in the car.



Temperatures can rise more than 35 degrees in about 30 minutes inside a vehicle

The *average* number of U.S. child vehicular hyperthermia fatalities per year since 1998 is **37**. It was found that 52% of the children were “forgotten” by a caregiver (222 children) in hyperthermia cases from 1998 through July 1, 2009. The remaining 48% were children playing in an unattended vehicle or intentionally left in the vehicle by an adult. The average age of fatalities was 24 months old.



Children’s bodies have greater surface area to body mass ratio, so they absorb more heat on a hot day (and lose heat more rapidly on a cold day). Further, children have a considerably lower sweating capacity than adults, and so they are less able to dissipate body heat by evaporative sweating and cooling.

The Centers for Disease Control says that heatstroke occurs when the body temperature reaches 104 degrees Fahrenheit;” essentially, “the body becomes unable to control its temperature: the body’s temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106 degrees F or higher within 10 to 15 minutes.”

*In June 2000, a mother in New Jersey left her son in the car with the windows rolled up for two hours. During that time span, she checked on him several times without realizing the temperature of the vehicle was nearing deadly temperatures. On her final check, she found her son passed out. She rushed him to the hospital, but he later died of heatstroke. An hour after his death, the boy’s body temperature was 108 degrees. **The temperature outside the vehicle was in the low 60s.***

Vehicles heat up rapidly, with the majority of the temperature rise occurring within the first 15 to 30 minutes. The average mean temperature increase was 3.2 degrees F per 5-minute interval, with 80% of the temperature rise occurring during the first 30 minutes. Leaving the windows opened slightly does not significantly slow the heating process or decrease the maximum temperature attained. The temperature increase in the car is caused by a greenhouse effect associated with a radiation imbalance and reduced ventilation. Long-wave radiation emitted by the car is “trapped” and prevented from escaping. Dark colored seats and dashboards can reach temperatures of 180 to 200 degrees!

Child Safety Recommendations:

- NEVER LEAVE A CHILD UNATTENDED IN A VEHICLE. NOT EVEN FOR A MINUTE !



Cracking windows of a parked car will not make a difference in how hot it will become inside the vehicle

- Be sure that all occupants leave the vehicle when unloading. Don't overlook sleeping babies.
- Always lock your car and ensure children do not have access to keys or remote entry devices. If a child is missing, check the car first, including the trunk. Teach your children that vehicles are never to be used as a play area.
- Keep a stuffed animal in the car seat and when the child is put in the seat place the animal in the front with the driver.
- Place your purse or briefcase in the back seat as a re-minder that you have your child in the car. Beat the heat, check the back seat!